

Earth, Fire and Water: Knowledge Sharing, Knowledge Recovery and Knowledge Management - Investigating Malaysian Community Behaviour

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Abstract

This paper reports on an investigation of the critical success factors (CSFs) of knowledge sharing behaviour (KSB) among Malaysian undergraduate students (MUS). The research question considered the question regarding “what makes knowledge sharing behaviour (KSB) successful among two Malaysian undergraduate communities in Manchester, United Kingdom and Kuala Lumpur, Malaysia?” The overall aim of the research is to identify the critical success factors (CSFs) for effective online knowledge sharing behaviour (KSB) among Malaysian undergraduate students (MUS). Each part of the study can be seen as a metaphor for three of the elements – Fire – for Knowledge Sharing as the sharing takes place rapidly and is difficult to control, Earth for Knowledge Recovery – seen as regeneration and Water for Knowledge Management – the liquid that allows all to flow in harmony and therefore all information to flow in natural and useful ways.

Keywords-; Knowledge Management Knowledge Sharing; Malaysian Communities; Online Behaviour; Blogs

1. INTRODUCTION

The research identifies how Malaysian undergraduate students (MUS) are using Web 2.0 applications and other media for knowledge sharing (KS). Web 2.0 applications have been used as the authoring tools and easy to use especially for non-information technology background students for knowledge sharing behaviour purpose. For most favourite tools to produce the weblogs are *Blogspot* and *Wordpress*. Meanwhile web-based social networking application and services the most accepted one is *Facebook*. The preliminary study identified the types and mediums of knowledge shared among Malaysian undergraduate students (MUS) from the perspective of community leaders. Challenges and difficulties in handling the community members of knowledge sharing (KS) have been identified. The target interviewees are student leaders in a student community representing Malaysian undergraduate students (MUS).

The main integrated applied theory is Knowledge Sharing Behaviour (KSB) theory which is adapted from four main theories. From the findings through the main data collection, an online questionnaire survey has been completed for both studies for validation purposes. A model of critical success factors (CSF) in knowledge sharing behaviour (KSB) methods among Malaysian undergraduate students (MUS) is one of the main contributions of this research.

II. KNOWLEDGE

In the new global economy, knowledge has become a central issue of primary resource for individuals (Drucker, 1992).

‘Knowledge is a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routine, processes, practices and norms’

(Davenport and Prusak, 1998, in Gamble and Blackwell, 2001; Zheng, 2005; Abdul Aziz and Lee, 2007; Ke and Wei, 2007)

The definition of knowledge above shows that Davenport and Prusak (1998) found that knowledge had been recognised and had become the most significant outline of capital needed. Furthermore, Karl Wiig’s definition below also shows us the significance of knowledge in our life as human beings too.

Knowledge can be arranged into a hierarchy according to Bender and Fish (2000). The data was classified into four categories: data, information, knowledge and expertise. Commonly the hierarchy starts with the data, which refers to raw numbers and facts (Liyanage et al., 2009). It becomes information when the data are understandable and have meaning. This means that information is processed data. Then, knowledge is authenticated information. Knowledge is also the application and productive use of information (Roberts, 2000). Knowledge is gained via a transformation through personal application, values and beliefs. This raises a good point which is that knowledge mainly comes from an individual’s brain originally (Liyanage et al., 2009). It is different to expertise, because expertise is about specialised deep knowledge and understanding a specific area in more depth than most people (Bender and Fish, 2000; Liyanage et al., 2009).

Storey and Barnett (2000) point out that various studies have highlighted a shift of focus from technical factors to human factors. At its early stage, knowledge management (KM) was largely in the domain of information technology (IT). According to a report by Storey and Barnett (2000), about 70 percent of articles on KM in 1998 appeared in IT or information systems (IS) publications. These articles focused on how to create the best technology to help companies manage their core knowledge. This turned out to be an ineffective approach to KM. The failure was mostly due to an overemphasis on IT and a lack of attention to human factors such as motivation, attention, creativity and organizational culture (Martensson, 2000; Malhotra, 2002; Storey and Barnett, 2002). To address this lack of attention to human factors, there emerged another approach to KM that focused on social and cultural factors (Davenport et al., 1998). Politis (2003) claimed that the new model of KM is about people. It looks at actions and has nothing to do with technology.

Politis’s statement is strength with the statement by Gurteen (1999) on his website (<http://www.gurteen.com>), he tries to correlate KM and KS with looking KM as the business for philosophy. It involves principles on process, organisation structures and technology. These principles may help people to apply knowledge to achieve their business’ purpose. Furthermore, he tries to change the old paradigm about knowledge being power to sharing knowledge is power. This shows that KS can empower people to fulfil a job effectively, maintain career development and achieve personal recognition targets.

However, the field of KM and intellectual capital(IC) is predicted to explode in the year 2010. This statement is proven by a study into the meta-analysis of this field which discovered that the literature consist of more than 100,000 publications (Serenko and Bontis, 2004). This study will therefore look deeply into the concept of human capital (HC) of KM and KS. HC is one of the primary components under IC. Graduates are one of the important sources of HC for every country. Furthermore, the government of Malaysia realised the importance of HC to the country. In Malaysia's science and technology policy for the 21st century, it is stated that Malaysia should change to become knowledge based and driven by HC, and quality wise HC should become the main factor for its independent and wealth nations (Official Portal, Ministry of Science, Technology and Innovation, 2009). Moreover, to ensure Malaysia achieves its targeted aspirations, extensive endeavours must be implemented, to build up HC. Indirectly, it may increase the nation's competitiveness, efficiency and capability for modernization (Office of Prime Minister of Malaysia, 2010).

III. THE RESEARCH PROBLEM

This research is concerned with how MUS assess information so that it becomes knowledge that enhances their student lives. The outcome statement is based on Yuen and Majid's (2007) research. This study found KS implementation in learning styles among Singaporean undergraduates. However, there are obstacles to KS that occur either at organization level or individual level (Jain et al., 2007). Culture is one of the main obstacles which is cited repeatedly in the literature on KM (Ikhsan and Rowland, 2004a; Riege, 2005; Ramirez, 2007; Jain et al., 2007; Rosen et al., 2007). Other obstacles in KS include lack of communication and social networking skills (Riege, 2005), lack of time (Rosen et al., 2007) and lack of trust (Cross and Baird, in Yuen and Majid, 2007; Riege, 2005). Furthermore, many situations occur where individuals will not share their personal knowledge on certain topics. This situation can be attributed to various factors including physical, technological, psychological, personality and cultural (Riege, 2005 and Yuan et al., in Yuen and Majid, 2007).

An additional factor is lack of motivation or rewards (Davenport, 1997, Soo et al., in Ramirez, 2007; Smith and McKeen, in Yuen and Majid, 2007), as people are reluctant to share without incentives. Another main obstacle in KS is the 'power of knowledge mentality' (Davenport, 1997; Chaudry, 2005; McClure and Faraj, in Yuen and Majid, 2007; Ramirez, 2007). People normally do not like to share their best ideas because it reduces their credibility in the organization and their ability to move ahead (Greengard, in Ramirez, 2007; Bender and Fish, 2000; Martensson, 2000 and Miller, in Ramirez, 2007). Based on the findings of this study (Yuen and Majid, 2007) it may be assumed that our undergraduates should realize the importance of skills in communication and social networking (Riege, 2005). With this assumption, barriers such as lack of communication skills and social networking can be reduced.

Besides the barriers in KSB, the Ministry of Higher Education of Malaysia did not have any specific policy or rules to ensure all the MUS to share their knowledge to improve their life on the campus.

So, the overall aim of the research is to identify the CSFs for effective KSB among Malaysian Undergraduate Students. The five objectives are:

- 1) Identifying the types of knowledge shared among MUS who are members registered within the two Malaysian communities.
 - 2) Exploring the process of KSB among Malaysian students' weblogs by using content analysis (CA)
 - 3) Comparing the similarities and differences of KSB among Malaysian students in two different cities: Manchester and Kuala Lumpur.
 - 4) Creating a way of evaluating the effectiveness of KSB.
 - 5) Developing a model of CSFs of KSB among MUS.
- was completed using content analysis of web conversations over a specified period of time.

IV. KNOWLEDGE SHARING

Recently many KM studies have been done in diverse sectors in Malaysia. For example, in the public services (Salleh and Ahmad, 2005; Ikhsan and Rowland, 2004a; Ikhsan and Rowland, 2004b), in small and medium enterprises (Wong, in Sharimllah Devi et al., 2007), in information technology (IT) and Multimedia Super Corridor (MSC) organizations (Chong a; Chong b; Chong and Lin; Chong et al, in Sharimllah et al., 2007), in telecommunication (Chong et al., in Sharimllah et al., 2007), in oil and gas (Abdul Aziz and Lee, 2007) and also in finance and banking (Ali and Ahmad, 2006). Studies on KM in the education sector exist but are limited. However, there has been little discussion about KM in education. Currently, only two studies have been found. The first research focuses on KS implementation among academic staff in Klang Valley (Jain et al., 2007), and the second is about organisational culture and KM processes of an institution of higher learning (Sharimllah et al., 2007). However, far too little attention has been paid to KS implementation among university students. Currently, this work has been applied to Singapore and only focuses on KS patterns in student learning styles (Yuen and Majid, 2007).

This study will be restricted to MUS who have good communication skills as well as basic IT skills. Eppler (2007) has suggested that knowledge communication has become an interactively assigning the message, which can be either verbal or non-verbal. Furthermore, communication skills have become one of the most important elements needed. Recently, communication tools which are affected by technology have also become extremely important. It is because of the rapid changes in trends that a competitive society now exists (Burke, 2007). These rapid changes can be as digital culture which it is still as new phenomenon to MUS.

V. THE EFFECTIVE KNOWLEDGE SHARING MODEL

The section will provide a basis to develop a context for the KS effectiveness model. The definition of knowledge must be clarified before discussing KS terms because this determines the way the study focuses on KM (Biejerse, 1999). In addition, knowledge is an important element in human life (Davenport and Prusak, 1998).

Their definition has been quoted by many academicians and practitioners (Gamble and Blackwell, 2001; Abdul Aziz and Lee, 2007; Ke and Wei, 2007; Zheng, 2005; Gammelgaard and Ritter (in Al-Alawi et al., 2007); Kim and Lee, 2006). Meanwhile many experts in management also have their own definition of knowledge, for example Wiig (in Brooking, 1996) claimed that knowledge is about truths and beliefs, perspectives and concepts, judgments and expectations, methodologies and know-how. However, Nonaka and Takeuchi (in Kubo et al., 2001) define knowledge as clear job-related information and the skills and experience required to carry out tasks. Furthermore, Gammelgaard and Ritter (in Al-Alawi et al., 2007) have

concluded that knowledge is a combination of life experiences which can evaluate and contribute new ideas. Based on this, Al-Alawi et al., (2007) suggest that knowledge is not limited to paper or databases, it also exists in people's minds and is expressed by their behaviours. In other words, knowledge has also been defined as justified belief which can enhance an entity's ability for action improvement (Alavi and Leidner; Huber and Nonaka (in Ke and Wei, 2007).

Knowledge is different from information in the sense that it is restricted to context, is more subjective and is connected to behaviour (Shaari, 2009).

"Information becomes knowledge when it is interpreted by individuals and given a context in the beliefs and commitments of individuals" (Nonaka et al., 2000).

In addition, Biejerse (1999) confirms that knowledge is more than information; it cannot simply be said, and it is seen more as a capability. In other words, the researcher agrees with the definition of knowledge as a justified belief which can enhance an entity's ability to act and improve (Ke and Wei, 2007). Knowledge consists mainly of explicit knowledge and tacit knowledge. Explicit knowledge can be described as documented knowledge while tacit knowledge can be known as non-documented knowledge (Ali and Ahmad, 2006; Brooking, 1996; Jain et al., 2007; Selamat and Choudrie, 2007; Zheng, 2005; Song, 2002; Kim and Lee, 2006; Brent and Vittal, 2007).

In this research, the effective Knowledge Sharing Model using web 2.0 tools is presented in the VII. Result which also has been validated through online questionnaire survey by the same group studies.

VI. KNOWLEDGE RECOVERY

What then is Knowledge Recovery – this is a new term and one that can be used to find out information – to find out about memories and about identities of artefacts, to engage almost with history. This kind of knowledge is embedded personally in an individual experience and depends on other factors such as personal belief, perspective and the value system (Shaari, 2009). Gourlay (2002) discovers that tacit knowledge has the identical phrase and defines it as practical know-how. It is informal rather than formal among professional groups including managers. What is particularly interesting is that new forms of digital technology are being used to enhance this process. For example, the web site talesofthings.com which allows users to record a "tale" about any object and to upload to an open source database is a form of both knowledge sharing and knowledge recovery.

Meanwhile, implicit knowledge has slight similarities with tacit knowledge. This implicit knowledge is knowledge which is hidden in the operating procedures, methods, or corporate culture of the company. Since they are hidden, they are difficult for the novice or beginner to identify and learn (Brooking, 1996). In other words, it can also be concluded as experience of the owner of knowledge.

In addition, Yang has identified emancipatory knowledge as the third dimension and it means the sentimental component of knowledge that determines one's view about how the world should be and is the product of seeking freedom from natural and social restraints (in Zheng, 2005).

Nonaka and Takeuchi (1995) have attempted to explain the basic gaps between Western and Japanese philosophy of 'knowledge inquiry'. The purpose for understanding the epistemology is that it may influence managerial practices. It may in terms of managerial thought lead to either knowledge or innovation. In the Western philosophical

tradition, it is influenced by the 'Cartesian split'. It happens within the subject as the knower and the object as the known mind and body, or mind and matter.

However, in Japanese philosophy, it is based on the strong traits of intellectual tradition. It includes: (1) individual of humanity and nature; (2) individual of body and mind; and (3) individual of self and other. In order to make important elements in the notion of knowledge in Japanese tradition, the concept of integration has been introduced. The human relationship characteristics are collective and organic in relation to the aforementioned notion. Furthermore, according to Nonaka and Takeuchi (1995), the most importance is among the individual. Those are the key elements for social interaction within knowledge conversion. This is supported by the idea that knowledge is dependent on the context itself due to the dynamic, relational and human action basis. So, this means that the situation and people involved are important rather than truths or facts themselves.

This situation reflects to Malaysia scenario, according to Mohayidin et al., (2007), the realization that knowledge is an intellectual asset is important. Their study reports that the Malaysian Ministry of Higher Education has identified KM as one of the requisites to ensure that Malaysia will become a quality hub of higher education and be able to compete with other developing countries. This support by a study of efficient and effective KM is reported by Marwick (2001). His study found that KM typically requires suitable grouping of managerial, community, and administrative efforts with suitable technology. Furthermore, in the field of business IT, various definitions of KM are found (Brooking, 1996; Rowley, 1999; Liebowitz, 2000; Alavi and Leidner, 1999; Zheng, 2005; Hult, 2003; Scott and Law, 2006; Hawamdeh, 2007). In other meanings, KM can also be considered as the process of transforming information and intellectual assets into enduring values (Alias, 2008). This is because it can connect people with the knowledge that they need to take action, when they need it (Alias, 2008). Furthermore, KM also can be one discipline that allows the transformation of ideas and information into business values (Alias, 2008). Generally, the researcher concludes that KM can be described as a process, approach, or method, based on how to manage knowledge in organizations. Thus, KS is one of the important knowledge activities in the KM process.

VII. RESULTS

The weblogs were observed over a period of time and a variety of theories were used to identify the Critical Success Factors. These were the Theory of Planned behavior; Social Cognitive Theory; Social Capital Theory and Social Exchange Theory and have been integrated to Knowledge Sharing Behaviour (KSB) Theory:

The results were those factors for effective sharing included Fairness and Enjoyment; Identification and Sharing Awareness (with others); Openness and Usefulness (Relevancy). This research is based on findings from previous research studies (Jain et al., 2007; Yuen and Majid, 2007; Ramirez, 2007; Al-alawi et al., 2007 and Zheng, 2005) on the relationship between KM, KS and Web 2.0 technologies. The main contribution from this research is the integrated adapted theories and construction of a model on the CSFs of KSB among MUS. The other contribution from this research is new definition about KSB and Web 2.0 based on this research context. At the end of this study, the five new findings may assist MUS to prepare themselves so that they can be successful students. A successful student in Malaysia means having a knowledge-sharing lifestyle during their student life in campus. The four new findings were:

- 1) Identification of the critical success factors for knowledge sharing among Malaysian undergraduates.
- 2) Identification of the mediums of how knowledge is shared among Malaysian students.
- 3) Exploration of the sharing differences of KSB among Malaysian students in two different cities, Manchester and Kuala Lumpur.
- 4) The creation of the Effective Knowledge Sharing model using appropriate adapted models.

<p>Community Perspectives in Social Value <u>FAIRNESS AND ENJOYMENT</u> Subjective Norm~ Human beliefs ~ Cognitive Competencies Behaviour ~ Person's behaviour ~Performance ~ Generalised Norm ~Trustworthiness~ Volunteerism Social and Structure ~ Generalised Norm ~ Trustworthiness~ Everyday Sociability~Volunteerism</p>
<p>Personal Perspectives in Content Value <u>IDENTIFICATION AND SHARING AWARENESS</u> Attitude towards acts or behaviour Subjective Norm ~ Human belief ~ Cognitive Competencies Behaviour Intention ~Judgement ~Volunteerism Behaviour ~ Person's behaviour ~ Performance Generalised Norm ~Trustworthiness~Volunteerism</p>
<p>Technology Web 2.0 Perspectives in Technology Value <u>OPENNESS AND USEFULNESS (RELEVANCY)</u> Equilibrium to a balance in the social exchanges through: *Weblog *Facebook Social Interaction Trust [Cognition-based and Affect-based] Behaviour ~ Person's behaviour~ Performance</p>

Figure 1: First significant results for first new findings indicated the identified success factors across Study 1 and Study 2

VIII. CONCLUSION

This paper has given a brief overview of a five-year research project – full results will be published in the near future after this research is totally completed. In this paper, only the first and second new findings indicated the identified success factors across Study 1 and Study 2 to lead the other new findings. The notions of Knowledge sharing: Knowledge Sharing, Knowledge Recovery and Knowledge Management have been discussed. The research relating to the investigation of knowledge sharing in an online Malaysian Community has been briefly conveyed. The metaphor of earth, fire and water in the context of knowledge has been introduced and will be further developed in later work. The importance of the work which will assist the Malaysian Government to design curriculum which will encourage sharing, cannot be overestimated.

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